

**JOB DESCRIPTION**  
**MURFREESBORO WATER AND SEWER DEPARTMENT**  
**INSTRUMENT TECHNICIAN**

1. **JOB TITLE:** Instrument Technician
2. **DEFINITION:** The Instrument Technician performs skilled work in the maintenance and repair of process control instrumentation within the water/wastewater system. This position reports directly to an Instrumentation Supervisor. All employees are responsible to the Director and the City Manager. The position is classified as non-exempt for purposes of the Fair Labor Standards Act, as having a possible occupational exposure to bloodborne pathogens, and as Safety Sensitive; the employee is subject to pre-employment, reasonable suspicion, post accident, random, promotion and transfer, return to duty and follow-up drug and alcohol testing.
3. **EQUIPMENT/JOB LOCATION:**
  - a. This position requires the use of hand tools, shop equipment, meters, computers and vehicles.
  - b. The job involves work both indoors and outdoors, and the employee may be exposed to inclement weather, as well as biological, chemical, electrical and mechanical hazards. All City buildings and vehicles are smoke-free.
4. **ESSENTIAL FUNCTIONS OF THE JOB:**
  - a. Checks, maintains and repairs various instruments and supervisory control and data acquisition (SCADA) systems.
  - b. Integrates new sites and systems into the SCADA system.
  - c. Writes ladder logic for programmable logic controllers.
  - d. Builds panels, runs and connects hard wire and fiber optic cables.
  - e. Reports status of instrumentation to supervisor; makes limited adjustments on own authority.
  - f. Enters data in logs, charts and records both manually and by computer keyboard.
  - g. Assists in overhaul of equipment.
  - h. Evaluates new equipment and assists in preparation of bid specifications.
  - i. Operates a vehicle for the purpose of performing job assignments in different sites.
  - j. Performs general cleanup activities.
5. **ADDITIONAL EXAMPLES OF WORK PERFORMED:**

Perform other duties and special projects as assigned.
6. **REQUIRED KNOWLEDGE, SKILLS AND ABILITIES:**

- a. Must be a minimum of 21 years of age.
- b. Must have diploma from an accredited high school or possess a GED.
- c. Must have legal authorization to work in the United States.
- d. Must submit to and pass a drug screen test upon offer of employment.
- e. Must have a driver's license valid in the State of Tennessee and the ability to safely operate a motor vehicle.
- f. Must be able to comprehend both oral and written instruction and to communicate both orally and in writing, in English.
- g. Ability to perform basic record keeping and mathematical calculations.
- h. Must be able to use hand tools, meters, calculators, keyboards and electronic test equipment and to manipulate machinery.
- i. Must be able to perform routine tasks from written and oral instructions and to exercise independent judgment within the limits of the position.
- j. Must be able to perform the duties of the job for the entire workday and occasional overtime. May be required to work evening, night, weekend and/or holiday hours.
- k. Ability to detect odors and colors indicative of hazardous gases and status indicators.
- l. Ability to sense vibration and temperature by touch.
- m. Ability to detect alarms and indicators of equipment malfunctions in normal aural range.
- n. Ability to read gauges, dials, equipment information plates, charts, and manuals, and make adjustments and do work requiring depth perception, and detect changes in the visual appearance of equipment and/or processes.
- o. Must have knowledge of electronic theory and practice of both analog and digital circuits.
- p. Must have knowledge of the operation of electronic components, their parameters and uses within circuits.
- q. Must be able to perform repairs on macro and miniature circuits.
- r. Must be knowledgeable of symbols and standard practices as related to instrumentation circuitry.
- s. Must be able to work on both hard wire and fiber optic systems.
- t. Must demonstrate willingness to comply with and a knowledge of safety rules and equipment, including identification of, precautions for, and emergency response to:
  - 1) Biological and chemical hazards,
  - 2) Electrical and mechanical hazards,
  - 3) Asphyxiating, toxic and explosive gases and vapors.
- u. Two years experience related to instrument maintenance is desired.
- v. Formal training in electronics at a vocational technical school level or college level is desired.

Non-Exempt  
Safety Sensitive  
July 19, 2007